Abstract

Concerns about mental health difficulties in young people, mid-adolescent girls in particular, are on the rise. Many explanations ranging from peer pressure and bullying, to social media and gender inequality have been offered for the rise in mental health problems. This study utilised data from the Millennium Cohort Study (Wave 6) to examine 14 year olds' mental health and wellbeing in relation to familial and peer interactions, gender, socioeconomic factors and social media use. Across measures of mental health and wellbeing, the findings showed that girls fared much worse than boys, particularly in experiencing negative feelings and low self concept and life satisfaction and in self harming. Teenage girls appeared to have become the new 'high risk' group. The findings from this study have implications for young people's mental health and wellbeing especially as seen through the lens of income and gender inequality. Given the current political concerns about young people's mental health, this study is hoped to contribute to an informed debate about individual wellbeing within a broader social milieu.

The social context of adolescent mental health and wellbeing: parents, friends and social media

Introduction

Mental health problems negatively affect young people's wellbeing and capacity to learn and make sense of the world and their place in it. Mental health and wellbeing are difficult constructs to define and measure. Mental health is not just the absence of problems but also young people's agency in constructing a coherent self and identity and contributing to their communities creatively and productively. Subjective wellbeing is about how people see themselves and evaluate their lives at present and for longer periods of time (Diener et al 2003; Statham and Chase 2010). Wellbeing has been studied from a hedonic perspective (life satisfaction by focusing on what makes life pleasurable and people happy) and eudaimonic perspective (good relationships with others, social support, personal growth) (Samman 2007). In their Childhood Wellbeing: a brief overview, Statham and Chase accepted that psychological / mental health and wellbeing could be seen as synonymous (2010). Mental health and wellbeing share similar domains in that low mood and self harm are likely to reduce young people's wellbeing in how they see themselves and how satisfied they feel with their life. Young people grow to adulthood within a complex web of family, peer, school and societal influences. They are capable of exercising agency defined as 'the role of the individual as a member of the public and as a participant in economic, social, and political actions' (Sen 1999, 19). Individual agency and societal influences are intertwined, affecting and affected by mental health and wellbeing, reinforcing the importance of locating these constructs within young people's social milieu.

Globally, concerns about young people's mental health are on the rise (eg, International NGO 2013; WHO 2002). In the UK, the Mental Health of Children and Young People in Great Britain study (2004) found that 1 in 10 children aged 5 to 16 years have a diagnosable mental disorder, with a higher prevalence found in boys. Ten years later, the Mental Health Difficulties in Early Adolescents study (Finch, Hargrave, Nichols, & van Vliet 2014) compared two cross-sectional groups aged 11 and 13 and found an increase in self reports of emotional problems among girls. Specifically, mid-adolescent girls were found to report lower life-satisfaction, self-esteem, emotional wellbeing and resilience compared with younger girls whereas boys' measures remained stable.

Girls and women are at higher risk than boys and men for mental health difficulties and many studies have corroborated the rise in depressive symptoms and self harm in girls (eg, Girlguiding 2015; Twenge 2017; Torrika et al 2014; WHO 2002). Boys' emotional difficulties, including depression, increased by 21 percent from 2012 to 2015, while girls' by 50 percent—more than twice as much. By 18 years, girls were twice as likely to experience internalising difficulties (eg, anxiety, depression) that carried over into adulthood (Shute 2016; Telzer & Fuligni 2013; Torrika et al 2014). The rise in suicide rates, too, is more pronounced among girls. Although suicide rates have increased for both sexes, three times as many 12-to-14-year-old girls killed themselves in 2015 as in 2007, compared with twice as many boys (Girlguiding 2015; Twenge 2017). All these studies agree that there is 'something deeply worrying about girls' wellbeing' (Finch et al 2014, 8). A combination of psychological, economic and social factors (e.g., lack of control or power, gender inequality) is likely to be responsible for this difference (eg, Blau et al 2006; Branisa 2014; International NGO 2013).

More often than boys, girls face challenges as diverse as gender inequality, cyberbullying, body image, pornography and everyday sexism (eg, Blau et al 2006; Branisa 2014). Socialisation pressures through body image control to be expressly feminine, along with post-feminist career and role aspirations influenced by misogynistic attitudes, are associated with a serious deterioration in adolescent girls' mental health (Shensa et al 2017). Girls tend to be exposed to earlier sexualisation (APA 2007a) through peer pressure and influence from female role models in pop culture and the social media, with sexual harassment being on the rise in schools (Morgan et al 2017). Furthermore, gender inequality shapes wellbeing by stratifying economic and social outcomes to favour men over women. Gender inequality is linked to unequal opportunities for men and women, cultural norms about gender-specific appropriate behaviours and beliefs about male and female competence and capability which then become guiding principles in everyday life and influence the distribution of power between men and women in the private sphere and in public life, ultimately constraining women's opportunities and their capabilities to live the life they value (Branisa 2014; Sen 1999).

The rise in young people's mental health problems has also been attributed to increasing income inequality and social polarisation (eg, Elgar et al 2016; Wilkinson and Pickett 2015; Viner et al 2012). An analysis of adolescent health in 34 mostly high-income countries found that income inequality related to more self-rated mental and physical health symptoms and school bullying (Elgar et al 2016). Severe depression nearly doubled among adolescents whose parents were unemployed with limited education: among boys, the prevalence was 6.5% in 2000–2001 and 12.8% in 2010–2011, and among girls 6.4% and 11.4% respectively (Torrika et al 2014). Adolescent girls experiencing poverty and disadvantage are particularly vulnerable as they often face much greater adversity than boys, including gender-based discrimination and violence, early discontinuation of their education and child trafficking (International NGO 2013; Rafferty 2013).

Poverty rates in the UK are consistently highest among children and their parents. Of the 12 million working-age adults and children in poverty, 8 million live in families where at least one person is in work (JRF Analysis Unit, 2017). Young people are realising that employment is no longer leading to lower poverty. Changes to benefits and tax credits for working-age families, rising inflation and high housing cost are reducing the incomes of many of those on low incomes, affecting young people most profoundly (Pickett and

Wilkinson 2015). Poverty exists in close, cyclical relationship with decreased wellbeing and mental health, where living in poverty predicts poor mental health, which in turn predicts poverty (Lund et al 2011). Both income inequality and poverty have been consistently linked to the quality of family and community life, including parenting, peer and other social relationships, social cohesion, women's status and mental illness (Pickett and Wilkinson, 2015). Working long hours to earn income, together with poor parental health relating to poverty, makes parenting taxing and might limit parents' ability to support and protect young people, including less positive communication and less monitoring of their whereabouts (Viner et al 2012).

Technology has propelled a radical generational shift in young people's experiences compared to their predecessors'. Today's teenagers are the first cohort to have 'grown up' with online social networking, influencing how they spend their time and engage socially and emotionally with their parents and peers. Online social networking offers access to spaces not controlled by adults and this is important considering that young people's access to physical public spaces has been reduced over time. They are also sites for toxic social comparison propelled by unrealistic standards of beauty, airbrushed body images and 'glamorous' lifestyles, cyber bullying and, most importantly, a new form of consensus based not on debate and reasoned argument but on 'likes' and 'favourites', promoting a view of young people's thoughts and social behaviour as mono-dimensional rather than complex and ambiguous (Shensa et al 2017; Twenge 2017).

The research evidence on associations between social media and mental health and wellbeing is mixed. Online social networking has been found to increase social support and self esteem and reduce social anxiety and isolation especially for young people with disabilities (Przybylski and Weinstein 2017), although a 'rich-get-richer' phenomenon has been observed whereby young people with offline friendships accrued greater benefits from online communication (Davis 2012). Many also argue that the observed spike in depression and anxiety, especially among teenage girls, has coincided with an increase in the use of social media with girls being the primary consumers (Haidt 2017; Kelly et al 2018; Shensa et al 2017; Royal College of Paediatrics and Child Health 2018; Twenge 2017). Kelly and colleagues (2018) found associations between social media use and depressive symptoms, with the associations being stronger for girls, with online harassment, self-esteem and body image largely explaining these associations. The Royal College of Paediatrics and Child Health reported moderately-strong associations between social media use and depressive symptoms but evidence for an association between social media use and behaviour problems, anxiety, hyperactivity and inattention and poor self-esteem was weak (2018).

Notwithstanding the mixed research evidence, social media use has an effect on young people's socialisation. Unlike face-to-face interactions, social media and the internet offer a different type of socialisation. Social skills, emotional connectedness, disclosure and empathy depend, to a great extent, on being able to read real-life facial expressions, emotions and body language (eg, Cash et al 2013). Limited interactions with peers where conflict situations and negative experiences arise can be detrimental to young people's development of emotional resilience. More generally, social media have been criticised for having a dampening effect on the development of a critical, less conformist self (Haidt 2017, Twenge 2017). And, although in some cases social media were found to support networking (Ellison et al 2007), it is not easy to ascertain whether such activities promote civic engagement, social trust and a real sense of community.

The aim of this study was to examine associations between 14 year olds' mental health and wellbeing and socio-economic background, gender, parenting, peer interactions and social media use. Also, gender differences across measures of mental health and wellbeing were examined. The premise that underpins this research is ecological in terms of focusing on the interaction between young people's wellbeing and their contexts (eg, family resources, parents, peers, online communities). Schools are important social ecologies within which peer interactions influence wellbeing, but we also need to examine the bigger context of young people's life and its relative influence on wellbeing.

As the review has shown, many studies have examined young people's mental health and wellbeing through the lenses of gender, familial, online and peer interactions and socio-economic factors, albeit in isolation and with relatively small samples. Indeed, few have used large national studies and even fewer have examined the interplay between wellbeing and social media use in mid adolescence (with the exception of a study by Kelly et al 2018). Also, in light of research pointing to a spike in mental health problems for mid adolescents, girls in particular, this study focuses on 14 year old boys and girls, a time period when they are in between childhood and adulthood, when many trajectories are still possible, likely to be influenced by their choices and behaviours.

The overarching research question that guided this study was: What was the cumulative and unique contribution of socio-economic background, gender, parenting and peer interactions and social media use to 14 year olds' feelings and moods, self-concept, life satisfaction and self harm? The measures of wellbeing used in this study were chosen to balance ill health (eg, negative feelings and moods, self harm) and mental health not only as an absence of problems but also as satisfaction with one's life and positive self-concept (eg, feeling good about oneself).

Method

Sample

The Millennium Cohort Study (MCS), Wave 6, surveyed the cohort members and their families in 2015 when the young people were aged around 14. Data were collected from 11,726 families. A survey response rate of 76.3% was achieved (of the eligible sample), and a co-operation rate of 78.5%. The survey response rate was lower than at MCS5 (81.4%). The 11,726 households contained a total of 11,884 cohort young people, including 142 sets of twins and eight sets of triplets. These sets were not included in this analysis to ensure independence of data. Ninety seven percent of young people completed the young person survey. This survey offers rich data on young people's mental health and wellbeing, social interactions, attitudes and behaviours (Calderwood et al 2015). To adjust for unequal selection probabilities and potential sampling error, the data were weighted (cross-sectional weights).

Measures

There were six sets of measures included in this study: socioeconomic background (ie, parent education, family income); gender; parenting (ie, parent control, parent-child emotional closeness); peer interactions (ie, bullying, time spent with friends); social media use; mental health (ie, moods and feelings, self-harm) and subjective wellbeing (ie, self-concept, life satisfaction).

Socioeconomic background: Measures of family income (from the UK whole sample) were based on the OECD equivalised income quintiles, with 17.2% families being in the first quintile; 16.9% in the second quintile; 20.3% in the third quintile; 22.9% in the fourth quintile and 22.6% in the fifth (highest) quintile. Parent educational qualifications: 6.4% in NVQ level 1 (no academic qualifications); 26% in NVQ level 2 (GCSEs); 16.8% in NVQ level 3 (A-levels); 36.9% in NVQ level 4 (degree) and 13.9% NVQ level 5 (higher degree).

Young person's gender: There were 50.1% boys and 49.9% girls in the sample.

Measures of young people's wellbeing and mental health were collected through the following variables,

Life satisfaction: This is adapted from the Satisfaction with Life scale by Diener et al (2003). The coefficient alpha for the scale ranged from .79 to .89, indicating that the scale has high internal consistency. For the purpose of this study, a composite variable was created with the following items: 'How happy is CM (Cohort Member) with school'; 'How happy is CM with the way they look'? 'How happy is CM with family', 'How happy is CM with friends', 'How happy is CM with school', 'How happy is CM with life as a whole?' These statements were measured on a scale 1 to 7 with 1 being 'completely happy' to 7 'not happy at all'. The composite variable was recoded into three categories, with 42.7% being 'completely happy', 32.7% 'somewhat happy' and 24.6% 'not very happy'.

Self-concept: Rosenberg's scale is a measure of young people's self-concept (Rosenberg, 1965). It includes the following items: 'On the whole, I am satisfied with myself'; 'I feel I have a number of good qualities'; 'I am able to do most things as well as other people'; 'I am a person of value'; 'I feel good about myself'. These statements were measured via a Likert scale (ie, strongly agree, agree, disagree and strongly disagree). The internal consistency of the scale ranges from 0.77 to 0.88 with test-retest reliability ranging from 0.82 to 0.85. For this study, to avoid small group sizes, levels of the composite variable were collapsed into three categories with 14.4% 'strongly agree', 59.7% 'agree' and 25.9% 'strongly disagree/ disagree'.

The Short Moods and Feelings Questionnaire (SMFQ): The SMFQ is a 13-item subscale from a longer 33-item questionnaire based on the DSM-III criteria for depression: 'I felt miserable or unhappy'; 'I did not enjoy anything at all'; 'I felt so tired I just sat around and did nothing'; 'I was very restless'; 'I felt I was no good anymore'; 'I cried a lot'; 'I found it hard to think properly or concentrate'; 'I hated myself'; 'I was a bad person', I felt lonely'; 'I thought nobody really loved me'; 'I thought I could never be as good as other kids'; 'I did everything wrong'. The internal reliability coefficient for the survey has been found to be good (Cronbach's alpha= 0.85), suggesting that this shortened version of the survey adapted from the long version is sufficient (Angold et al 1995). Young people were asked to complete the SMF to assess feelings and behaviours associated with depressive characteristics over a fortnight. This is a screening tool and should not be used for diagnosing depression. The items were measured as 'Not True' (19%), 'Sometimes True' (70.7%) and 'True' (10.3%).

Self-harm: One question was asked about whether CM has self-harmed in the past year, with 14.6% answering 'Yes' and 86.4% 'No'.

Parenting

Parent control: A composite variable was created with three items: ‘When CM goes out, how often do parents know where?’; ‘When CM goes out, how often do parents know who with?; ‘When CM goes out, how often do parents know what CM does? The initial 4 categories of the composite variable, ‘Always’, ‘Usually’, ‘Sometimes’ and ‘Never’ were recoded into three with 55.4% stating ‘Always’, 35.2%’ Usually’ and 9.4% ‘Sometimes / Never’.

Emotional closeness with mother: For the item ‘How close is CM with mother?’ 43.3% responded being ‘extremely close’; 38.1% ‘very close’; and 18.6% ‘fairly close’ / ‘not very close’.

Emotional closeness with father: For the item ‘How close is CM with father?’ 31.5% responded ‘extremely close’; 36.5% ‘very close’; and 31.9% ‘fairly close’/ ‘not very close’.

Peer interactions

Friendships: There were two items for time spent with friends: ‘When not at school, how often do you spend time with your close friends?’, with 37.4% responding ‘most days’; 34.7% ‘at least once a week’ and 27.9% ‘once a month / less often’; and ‘How often do you spend time with friends (unsupervised), with 60.1% responding ‘most weekends’; 22.4% ‘at least once a month’ and 17.5% ‘less often than once a month’.

Bullying: There are separate measures for perpetrator and victim, each based on two items: for perpetrator, ‘How often CM hurts or picks on other children?’ and ‘How often CM bullied other children online?’; and for victim, ‘How often other children hurt or pick on CM?’ and ‘How often other children bullied CM online?’. The composite variable for victim was recoded into 3 categories, with 68.2% responding ‘less often/ never’; 26.7% ‘often’ and 5.1%‘very often’. The composite variable for perpetrator was 86.1% ‘less often/ never’; 12.7% ‘often’; and 1.2% ‘very often’.

Social networking: Young people were asked how many hours per day spent visiting social network sites with 51.6% spent 0-less than 2 hours, 29.3% 2-less than 5 hours and 19.1% 5 to 7 hours or more.

Analytic Plan

Initially, through cross tabulation analyses between gender and measures of mental health and wellbeing, chi square values were examined (Table 1).

A series of regression analyses (i.e., ordinal and binary regressions) were employed to examine the unique and cumulative contribution of the predictor variables to 14 year olds’ mental health and wellbeing. Ordinal regressions because of the ordinal nature of the outcome variables: Moods and Feelings (Not True, Sometimes True and True); Self-concept (Strongly agree, Agree, Strongly disagree / Disagree); and Life Satisfaction (Completely happy, Somewhat happy and Not very happy). A binary logistic regression was employed for the categorical variable Self-Harm (Yes, No).

The SPSS Ordinal Regression procedure or PLUM (Polytomous Universal Model) was employed to run ordinal regression. The proportional odds assumption, i.e., the relationship between each pair of outcome groups is the same in that the coefficients that describe the

relationship between the lowest vs. the higher categories of the outcome variable are the same as those that describe the relationship between the next lowest category and all higher categories, was tested via the Parallel Lines test. The results indicated no differences between the categories of the outcome variables and thus the assumption was met. Moreover, for each ordinal regression analysis, the goodness-of-fit test was found to be nonsignificant (p=1.0), indicating that the full model fit the data. The odds ratio (exponentiation of the co-efficient b) which is about the odds of falling into a comparison group compared to the odds of falling into the reference category for each predictor variable was examined (Field 2009). To calculate the percentage change in the odds the formula 100 x (Odds Ratio -1) was used. For binary logistic regressions, the assumptions are linearity and multicollinearity. The question of how much better the constructed model predicts set positions is assessed by examining the model chi-square statistic. Tables 2 and 3 present the parameter estimates, the standard error and the odd ratios for each predictor for the ordinal and binary outcome variables.

Results

The ordinal regression analysis for Moods and Feelings produced two prediction equations, one predicting the odds of being in the 'Not True' vs. 'True', and one predicting the odds of being in the 'Sometimes True' vs. 'True' category. Thus, the reference category was 'True'. The full model predicted moods and feelings, $X^2(25)= 2058.29$, $p<.000$. The Nagelkerke pseudo r^2 (effect size measure) was .26, indicating that 26% of variance in moods and feelings was accounted for in the full model. The ordinal regression for Self Concept produced two prediction equations, one predicting the odds of 'Strongly Agree vs. Strongly Disagree / Disagree' and the one predicting 'Agree vs. Strongly Disagree / Disagree', thus 'Strongly Disagree / Disagree' is the reference category. The full model predicted school attitudes, $X^2(25)= 1177.58$, $p<.000$. The Nagelkerke pseudo r^2 was .25, indicating that 25% of variance in self concept was accounted for in the full model. The ordinal analysis for life satisfaction produced two prediction equations, one predicting the odds of 'Completely happy' vs. 'Not very happy' and the one predicting 'Somewhat happy' vs. 'Not very happy', thus 'Not very happy' is the reference category. The full model predicted life satisfaction, $X^2(25)= 2874.74$, $p<.000$. The Nagelkerke pseudo r^2 was .32, indicating that 32% of variance in life satisfaction was accounted for in the full model.

For the binary regression analysis, the omnibus test for self harm: $X^2 (11) = 1372.90$, $p<.000$ was statistically significant, pointing to a good model fit. The Nagelkerke pseudo r^2 was .26 for self harm, indicating that nearly 26% of variance in Self-harm was accounted for in the full model. The Hosmer Lemeshow test for self harm was not statistically significant, $X^2 (8) =9.92$. $p<.27$, meaning the observed probabilities matched the predicted probabilities. Finally, to check how well the model predicted group membership, it correctly classified 59.8% of cases (constant only) and 87.1% with the predictors included.

Gender and mental health and wellbeing

The relationship between gender and mental health and wellbeing (ie, life satisfaction, self concept, feelings and moods and self harm) was initially examined via a series of cross-tabulations and chi-square tests (Table 1). Across analyses, compared to boys, 14 year old girls reported significantly less satisfaction with life; lower self concept; negative feelings and moods and were more likely to self harm. Specifically, nearly two thirds of girls and a third of boys reported that they are not satisfied with their life; nearly four times more girls

than boys reported low self concept; and around a quarter of boys and three quarters of girls reported negative mood and feelings and self harm.

Gender also emerged as a strong predictor across regression analyses. Compared to boys, girls were two and half times more likely to report negative moods and feelings; nearly twice more likely to report low life satisfaction; and four times more likely to report low self-concept. Finally, 14 year old girls were over three times more likely than boys to self-harm (Tables 2, 3).

Socio-economic background

No significant associations were found between parent education and young people's life satisfaction; moods and feelings; self concept; and self harm. Family income was found to relate to moods and feelings and life satisfaction. Compared to young people in the highest quintile, those in the lowest were 10% and 48% more likely to report negative feelings and low life satisfaction respectively. Also, young people in the second and third quintile were 31% and 22% more likely to report low life satisfaction. This suggests a graded relationship between income and life satisfaction.

Parenting

Compared to 14 year olds with parents who did not know about their whereabouts, those with parents who 'always' knew where, with whom and what their children did were 49% less likely to report negative moods and feelings; 66% less likely to report low life satisfaction; and 51% less likely to report low self-concept. As parental control decreased in a sense of not always knowing about young people's whereabouts, there was a 42% increase in the likelihood of self-harm (Tables 2, 3).

Emotional closeness to mother and father was found to strongly associate with young people's mental health and wellbeing. Compared to young people who reported to be 'extremely close' to their mother, those who felt 'fairly / not very close' were nearly three times more likely report low self- concept and life satisfaction; and twice as likely to express negative feelings. Likewise, compared to those who were 'extremely close' to their father, young people who felt 'fairly / not very close' were over two times more likely to report negative feelings; over two and a half times more likely to report low life satisfaction; and nearly twice as likely to have low self-concept (Tables 2, 3). As emotional closeness to mother and father increased there was a 17% and 33% decrease in self-harm (Table 2).

Peer interactions

Compared to young people who rarely played unsupervised with their friends, those who played almost daily showed a 17% decrease in the odds of reporting negative feelings; and 21% and 19% decrease in reporting low life satisfaction and low self-concept. Likewise, those who met with their friends out of school frequently were 32% and 24% less likely to report low self concept and life satisfaction, and 32% less likely to report negative feelings. The frequency of spending time with friends was not found to associate with the likelihood of self-harm (Tables 2, 3).

Bullying emerged as a strong predictor. Compared to young people who seldom were victims of bullying, those who were bullied most days / once a week were ten times more likely to

report negative feelings and low self concept and over six and a half times more likely to report low life satisfaction. Those bullied once a month / every few months were three and a half times more likely to report negative feelings and low self concept and two and a half times more likely to report low life satisfaction. As bullying decreased, 14 year olds were 68% less likely to self-harm. No significant association was found between being a perpetrator of bullying and wellbeing although there was a 16% decrease in the odds of self harm for young people who did not bully others often (Tables 2, 3).

Social networking sites

Compared to young people who spent 5 to 7 hours or more daily on social networking sites, those who spent less than 2 hours and between 2 and 5 hours daily were 44% and 31% less likely to report negative feelings; 44% and 31% less likely to report low self- concept; and 37% and 29% less likely to report lower life satisfaction. As the hours spent daily visiting social network sites increased, there was a 32% increase in the likelihood of self-harm. Girls were nearly three times more likely than boys to spend 5 to 7 hours or more on social media (Tables 2, 3).

Taken together, across mental health and wellbeing measures, gender emerged as a particularly strong predictor with girls faring much worse than boys. Girls were far more likely to self-harm and report negative feelings and low self-concept and life satisfaction. As social media use increased, both boys and girls were more likely to report low self concept and feelings and be less happy overall. A similar trend emerged with bullying in that victims of bullying were far more likely to self harm and report negative feelings and low self concept and life satisfaction. Family income was found to positively relate to young people's wellbeing. Parent control (ie, knowing about 14 year olds' whereabouts) and emotional closeness to parents were also found to associate with a more positive outlook among young people.

Discussion

The aim of this study was to examine 14 year olds' mental health and wellbeing and its association with familial and peer interactions, gender and socio-economic factors.

Parenting and young people's mental health and wellbeing

The findings in this study showed a strong relationship between parent control and emotional closeness and 14 year olds' mental health and wellbeing. Closeness to father and mother was found to contribute to adolescents' life satisfaction and happiness. This is consistent with the findings from a study by Viner and colleagues who found that family connectedness is one of the most important factors that protects against poor health outcomes in adolescence (2012). Warm parenting is thought to be instrumental for young people's emotional regulation and interpersonal closeness because it offers a safe platform to moderate emotions and behaviour and manage stress and relationships (Power 2004; Viner et al 2012). Positive relationships with parents is linked to mental health and wellbeing in that children are more likely to show intrinsic motivation and engage activities with interest and spontaneity; internalize appropriate behaviours and display openness in social relationships; and show resilience when faced with adversity (Vansteenkiste and Ryan 2013).

Moreover, a large percentage of young people in this study reported that their parents were almost always informed about their whereabouts being associated with increased mental health and wellbeing. This could be explained by considering previous findings showing that parental alertness and autonomy support foster open and honest communication in parent-child relationships which is linked to wellbeing (e.g., Grolnick et al 2015; Vansteenkiste and Ryan 2013). By being informed about their children's whereabouts parents were able to provide autonomy support and encourage explorations. As such, they were more likely to be mentally present and proactive in considering the impact of situations on young people's feelings, alerting them to the possibility of risk and exposure to peer violence.

Although parent education, mother education in particular, has been found to associate strongly with children's academic achievement (Hartas 2012), its contribution to 14 year olds' mental health and wellbeing was not found to be significant in this study. In contrast, family income emerged as a strong predictor of young people's life satisfaction and self-harm, especially for girls. Poverty affects women and girls disproportionately, with self-harm being more common among girls living in deprived areas and during economic recession (Morgan et al 2017; International NGO 2013, Rafferty 2013). The association between income inequality and wellbeing is consistently strong (Elgar et al 2016; Pickett and Wilkinson 2015). Limited material resources in early years in particular are known risk factors for reduced wellbeing and mental health (Tracy et al 2008; Najman et al 2010; Viner et al 2012). Income inequality is a structural determinant of mental health in young people: Inequality affects public services and infrastructure to support social benefits, especially for low-income families but also erodes social trust and social capital, especially 'bridging' capital that supports access to educational and job opportunities, resulting in stress and social problems (Pickett and Wilkinson 2015). Moreover, inequality fosters a 'harsh environment in which children experience more peer rejection, bullying, conflict and risk behaviours' (Elgar et al 2016; 4). Because relative socioeconomic position is a more important determinant of child well-being than are absolute levels of poverty, young people do better when they live in communities with less income inequality (Pickett and Wilkinson 2015).

Peer interactions, social media and young people's mental health and wellbeing

Peer influence operates as a counterpoint to continued parental influence throughout adolescence, and as parental influence declines peer relationships become important (Viner et al 2012). Positive peer interactions and relationships predict wellbeing, and are essential to physical and mental health (Heydenberk and Heydenberk 2017). The findings from this study confirm this view in that spending time with friends out of school and in adult unsupervised activities was associated with increased wellbeing. This has interesting implications for young people's wellbeing considering a decline in adult –free and unsupervised play in childhood in the context of intensive parenting (Whitebread 2017). In this study, young people who were bullied were more likely to report reduced wellbeing whereas no association was found between being a perpetrator of bullying and wellbeing. This was an unexpected differentiation in that research has shown bullying to be associated with poorer social, emotional, and physical health for both the victim and the bully (Heydenberk and Heydenberk 2017). Bullying, understood as an 'intention to cause physical or emotional harm', is associated with depression, self harm and suicide (Espelage and Holt 2013). Bullying does not allow space for conflict resolution necessary to build resilience and autonomy. And this can have serious consequences for victims and perpetrators even if perpetrators do not report reduced wellbeing.

Social media has become an inextricable part of adolescent life. It can be a force for good in the lives of young people but also a site for toxic social experiences. In this study, a graded relationship was found between time spent visiting social networking sites and wellbeing and self harm. This is consistent with research on the negative association between social media and wellbeing (eg, Pantic et al 2012; Kelly et al 2018; Twenge 2017). The association between social media and 14 year olds' wellbeing is multifaceted. It could be that teenage girls and boys with depression-related difficulties and diminished self concept are more drawn to social media for socialisation because they, compared to face-to-face interactions, offer a controlled setting (Lin et al 2016). It could also be that adolescents who spend considerable time on social media subsequently develop depressive characteristics due to limited exposure to real-life interactions which offer opportunities for empathy and relatedness and civic engagement (Pantic et al 2012).

Are teenage girls the new 'high-risk' group?

Girls in this study were disproportionally more likely than boys to report self-harm and experience negative feelings and low self concept and life satisfaction. Consistently, self-harm reported to GPs among teenage girls under the age 17 increased by 68% between 2011 and 2013. Girls between 10 and 19 years of age were found to be three times more likely than boys to self-harm and repeat self-harm. Although incidence of self-harm remained fairly constant among boys aged 10 to 19 and among girls 10-12 and 17 or older, there was a spike (68% increase) of reported self- harm for girls aged 13 to 16 years old, between 2011 and 2014 (Morgan et al 2017). Also, initial analyses of the young people's MCS surveys showed that 1 in every 4 girls at the age of 14 reported depressive symptoms compared with 1 in 10 boys (9%), suggesting a spike in depression–related difficulties among millennial girls (Patalay and Fitzsimons 2017). These findings are not surprising in that they reflect and reinforce trends in mental health evident since 2008 as a study by Zahn-Waxler and colleagues have shown in which women were more likely to experience depression and anxiety than men. What is surprising however is that recent cohorts of teenage girls are at greater risk than earlier ones (Finch et al 2014).

Recent generations of teenage girls spend a considerable time daily on social media which makes them more likely to be exposed to cyber-bullying, early sexualisation and consumerism, linked to low self-esteem, self-concept and life satisfaction (Bessière 2010; Kelly et al 2018). This is consistent with the findings from this study as well as with data from Understanding Society which showed that girls were far more likely than boys to spend over 3 hours daily, 11% compared to 5% of boys (Office for National Statistics 2015). Teenage girls are at a critical juncture for identity construction and acceptance of norms and exposure to highly idealised representations of peers on social media which in turn elicits feelings of envy and a distorted belief that others lead happier and more successful and fulfilling lives is harmful (Chou 2012; Kelly et al 2018). Current views of 'girl' power propelled through social media and pop culture promotes narrow perspectives of femininity reduced to 'thin sexy bodies and behaviour' (Shute 2016, 15) while the power of patriarchy remains unchecked.

Societal and cultural changes are likely to explain recent trends in teenage girls' mental health. Girls and young women are told that they can have whatever they wish, that gender equality has been achieved. Within neoliberal feminism or post feminism the dominant discourse has been that major obstacles to gender equality have been removed in that increasing numbers of girls succeed educationally and access the workplace. However, as

current evidence on the decline in girls' mental health and wellbeing suggests this is far from the truth. Although since the 60s there have been gains in achieving gender equality, girls still face discrimination. The World Economic Forum's Global gender gap index has shown gender differences in objective wellbeing globally (Behkouche et al 2015). Girls are more likely to experience violence and abuse and be expected to work without pay and are less likely to access education and resources (Keyes et al 2012; Shute 2016; United Nations 2000) resulting in 'languishing' rather than 'flourishing' (Skrzypiec et al 2014).

The trajectories in young women's mental health and wellbeing should be seen within the wider context of gender inequality to contest views of mental health problems as a sign of individual psychopathology. There are cultural explanations (eg, gender inequality, poverty) as to why young women's coping mechanisms are increasingly under strain. As Dorling and colleagues assert, 'various forms of harms are not distributed randomly, but fall upon people of different social classes, genders, degrees of physical abilities, racial and ethnic groups, different ages, sexual preferences and so on' (2008, 14). The decline in young women's mental health and wellbeing is a sign of discontent and anger-turned-within with their life prospects being considerably worse than before, especially in an era of austerity.

Strengths and limitations

One of the limitations of this study is its reliance on young people's self-reports rather than measures derived from diagnostic interviews, especially with regard to depressive feelings and moods. Although the scales used, including the shorter versions, were validated, they may identify the presence of symptoms or characteristics at a lower threshold than diagnostic interviews do (Daviss et al 2006). Also, absence of a general sense of wellbeing should not equate with mental health problems. This raises questions about which indicators of mental health difficulties are used and whether they are systemic rather than psychological in origin.

A strength of this study lies in examining young people's wellbeing within a broader social context. The notion of wellbeing has been criticised for being atomised and rather narrow, confined to how individuals see themselves and how satisfied they are with their achievements and life in general. This study examined wellbeing through the lenses of family, face-to-face and online peer interactions, essentially through how young people relate to the world around them. Future research should go a step further to conceptualise wellbeing along the lines of good or meaningful life achieved by deploying one's strengths in the pursuit of something greater than oneself for the common good (Seligman 2002).

Finally, considering the associations between social media use and mental health and wellbeing, future research should examine different social networking platforms and the type of usage associated with them, as well as their content and contextual elements. For example, time on social media could be primarily spent passively or actively and these distinct patterns of use may contribute to young people's wellbeing differently. It may be that young people who are active users feel more socially engaged and find meaning in their social interactions.

Conclusion

This study examined 14 year olds' mental health and wellbeing by delineating the contribution of social and structural factors present in their life. In light of the findings about the strong contribution of parenting, peer interactions, socioeconomic factors and gender, it would be a mistake to manage mental health risk at the level of the individual without

accounting for the social ills that underpin the rise in mental health difficulties. It is arguable whether, in the face of a large scale onslaught on the basic values which underpin a healthy society, individual interventions to promote mental health can have any meaningful impact at population level. It is for this reason that public mental health must champion policy interventions which address structural determinants. Although massive increase in global wealth has reduced levels of absolute poverty in most countries, deregulated financial markets have contributed to financial instability and austerity, growing inequality and uncertainty in job prospects, housing and food security which are likely to decrease young people's wellbeing more than previous generations (Patel 2015; Pickett and Wilkinson 2015). Rather than focusing on young people's individual risk, a social harm framework could identify collective responses, enabling a wider investigation of institutional and cultural barriers and lack of educational opportunities in young people's life and act to address systemic inequalities. As Patel (2015) and Pickett and Wilkinson (2015) argued, public mental health must not only equip people and communities to better cope with the stressors created by a dysfunctional world, but also target the very drivers of this dysfunction.

This raises important questions for policy. The green paper *Transforming children and young people's mental health provision* published in December 2017 by the Department of Health and the Department for Education has set a priority to ensure schools are adequately supported to build whole school environments to enable pupils to achieve their full potential. However, the green paper's scope appears narrow in that it offers a rather limited analysis of gender disparity and the observed spike in mid-adolescent girls' mental ill health. It also puts the onus on the teaching workforce to support children with mental ill health without offering sufficient resources and training. Schools have been working hard towards becoming inclusive and respectful communities to support students' wellbeing. School-based approaches to mental health (eg, mindfulness, early intervention, personalised learning) and the ways in which educational professionals support mental health are often disparate and fractured, taking an individual psychopathology perspective towards wellbeing. To understand the trends and triggers of mental ill health in young people and how to prevent it in the first place, wider societal influences, beyond the school context, should be examined. This is likely to support schools to adopt a social rather than individual psychopathology perspective in responding to young people's mental ill health.

Effective integration of mental health goals and evidence-based practice in education requires a better understanding of the societal basis of young people's mental health. Considering that girls are likely to fare worse mental health than boys, a feminist perspective is needed to address the decline in teenage girls' mental health and also understand the consequences of gender and, more generally, structural inequality for wellbeing which not only harm females but also males (Sen 1999). And such perspective is missing from current policy which places the onus on individuals, ie, young people, teachers, parents, to resolve inequality. Young people respond to this by focusing more on the self, as an ongoing improvement project, and less on societal structures likely to promote mental ill health in the first place. As such, girls and young women tend to internalise systemic problems as personal failings and blame themselves for them.

Understanding the pernicious consequences of gender inequality and poverty for young people's wellbeing may be a good starting point to formulate appropriate public health and education responses that are adequately resourced and take into account young people's views. Although parents and peers are important sources of wellbeing, cultural, educational and institutional changes are needed to promote wellbeing. As Branisa and colleagues argued

(2014), inequality (including gender inequality) is the result of human behaviour, and institutions, including schools, can influence wellbeing by raising awareness about the ways in which societal and cultural norms, codes of conduct and values guide human behaviour. Mental ill health is a global challenge whose nature is multidimensional requiring comprehensive approaches in seeking solutions at a societal level.

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Table 1: % of Male and Female across mental health and wellbeing measures

	Male	Female	Chi square	P
Life satisfaction:			285.85	.0001
Completely happy	57.3	42.7		
Somewhat happy	48.3	51.7		
Not happy at all	37.3	62.7		
Self concept:			477.24	.0001
High	53.2	46.8		
Low	21.3	78.7		
Moods and Feelings:			511.13	.0001
Not True	63.7	36.3		
Sometimes True	49.5	50.5		
True	22.5	77.5		
Self harm:			403.39	.0001
Yes	26.6	73.4		
No	53.4	46.6		

N= 11303-11335

Table 2 Ordinal Regression for Moods and Feelings and Binary Logistic for Self harm

	Moods and Feelings		Self harm	
	B(SE)	Odds Ratio	B(SE)	Odds Ratio
Family Background				
Child sex:			1.11(0.77)	3.05***
Girls vs. boys	.89 (.05)	2.44***		
Family Income:			.041(.03)	1.04
Highest vs. lowest quintile	-.103 (.102)	0.90*		
Highest vs. second quintile	-.038(.08)	0.96		
Highest vs. third quintile	-.02(.07)	0.97		
Highest vs. fourth quintile	.09(.06)	0.91		
Parent educational qualifications:			-.078(.033)	.92
NVQ5 vs. NVQ1	-.06(.12)	0.94		
NVQ5 vs. NVQ2	.122(.08)	1.11		
NVQ5 vs. NVQ3	-.028(.09)	0.97		
NVQ5 vs. NVQ4	-.038(.07)	0.96		
Parenting				
Parent control:			.357(.05)	1.42***
Low vs. High	-.65(.09)	0.51***		
Low vs. Medium	-.172(.09)	0.84		
Emotional closeness (Mother):			-.18(.05)	.835***
Extremely close vs. fairly close	.773(.08)	2.16***		
Extremely close vs. very close	.218(.06)	1.24**		
Emotional closeness (Father):			-.388(.05)	.679***
Extremely close vs. fairly close	.726(.07)	2.06***		
Extremely close vs. very close	.304(.07)	1.35***		
Peer Interactions				
Unsupervised time with friends:			-.023(.05)	.977
Low vs. High	-.184(.08)	0.83**		
Low vs. Medium	-.090(.08)	0.91		

Time with friends (out of school):			.07(.05)	1.07
Less often/ never vs. very often	-.327(.07)	0.68***		
Less often/never vs. often	-.089(.07)	0.91		
Bullying victim:			-1.12(.05)	.324***
Less often /never vs. very often	2.38(.12)	10.8***		
Less often / never vs. often	1.25(.06)	3.49***		
Bullying perpetrator:			-.170(.08)	.844*
Less often /never vs. very often	-.142 (.23)	0.86		
Less often / never vs. often	.07(.08)	1.07		
Social networking:			.277(.04)	1.32***
High vs. Low	-.577(.07)	0.56***		
High vs. Medium	-.360(.07)	0.69***		

*P<.05; **p<.001; ***p<.0001

Table 3 Ordinal regression: Self-concept and Life Satisfaction

	Rosenberg: Self Concept		Life Satisfaction	
	B(SE)	Odds Ratio	B(SE)	Odds Ratio
Family Background				
Child sex:				
Girls vs. boys	1.40(.09)	4.05***	.628(.04)	1.87***
Family Income:				
Highest vs. lowest quintile	.049(.09)	0.79	.272(.08)	1.48**
Highest vs. second quintile	.124(.07)	0.95	.393(.07)	1.31***
Highest vs. third quintile	.064(.06)	1.01	.200(.06)	1.22**
Highest vs. fourth quintile	.078(.06)	1.01	.095(.06)	1.09
Parent educational qualifications:				
NVQ5 vs. NVQ1	.08(.11)	1.17	.003(.11)	1.07
NVQ5 vs. NVQ2	.195(.08)	1.16	.075(.07)	1.07
NVQ5 vs. NVQ3	.064(.08)	1.06	-.060(.08)	0.94
NVQ5 vs. NVQ4	.028(.07)	0.91	-.029(.06)	0.97
Parenting				
Parent Control:				
Low vs. High	-.498(.08)	0.49***	-1.068(.08)	0.34***
Low vs. Medium	-.166(.08)	0.69*	-.480(.08)	0.61***
Emotional closeness (Mother):				
Extremely close vs. fairly close	.704(.07)	2.84***	1.104(.07)	3.01***
Extremely close vs. very close	.331(.05)	1.47***	.456(.05)	1.57***
Emotional closeness (Father):				
Extremely close vs. fairly close	.749(.07)	1.78***	.935(.06)	2.54***
Extremely close vs. very close	.374(.06)	1.09***	.349(.06)	1.41***
Peer Interactions				
Unsupervised time with friends:				
Low vs. High	-.185(.07)	0.81**	-.225(.07)	0.79***
Low vs. Medium	-.150(.07)	0.68**	-.245(.07)	0.78***
Time with friends (out of school):				
Less often/ never vs. very often	-.132(.07)	0.68**	-.269(.06)	0.76**
Less often/never vs. often	-.068(.06)	0.91	-.165(.06)	0.84*

Bullying victim:				
Less often /never vs. very often	.355(.27)	10.85**	1.90(.11)	6.68***
Less often / never vs. often	.495(.05)	3.51*	.925(.05)	2.52***
Bullying perpetrator:				
Less often /never vs. very often	-.142(.23)	0.86	.003(.21)	1
Less often / never vs. often	.07(.08)	1.07	.18(.07)	1.2**
Social networking:				
High vs. Low	-.577(.07)	0.56***	-.448(.06)	0.63***
High vs. Medium	-.360(.07)	0.69***	-.334(.06)	0.71***

*P<.05; **p<.001; ***p<.0001